

*RATTUS VILLOSISSIMUS* (WAITE)—A NEW MAMMAL RECORD  
FOR WESTERN AUSTRALIA

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SUMMARY

Two specimens of *Rattus villosissimus* collected in Western Australia in August 1968, the first known occurrence of the species in the State, are recorded and described.

*Rattus villosissimus* (Waite) is normally resident in relatively low numbers in parts of western Queensland, the eastern margin of the Northern Territory, and north-eastern South Australia. At intervals it increases enormously in numbers and invades other parts of the country in which it presumably does not usually occur. The mechanisms involved in its population fluctuations and the nature of its movements are obscure. Because of its periodic appearance in large numbers it is commonly called the plague rat.

One of the greatest irruptions occurred during the years 1967–1969. The most westerly locality from which specimens have been recorded is Humbert River Station, N.T. (130° 39'E, 16° 29'S). The specimens, taken in 1968, are housed in the American Museum of Natural History, New York, and CSIRO Division of Wildlife Research, Canberra (Taylor and Horner, 1973). Parker (1973) gives an anecdotal report of the species presence in 1968 at Mongrel Downs (129° 44', 20° 34') near the western border of the Northern Territory. Taylor and Horner also record an old skull found in a cave near the south coast of South Australia, approximately 80 km east of the Western Australian border.

Two specimens representing the first known occurrence of *R. villosissimus* in Western Australia, were collected by Dr G. F. Mees in August 1968. They were preserved in alcohol and subsequently prepared as skins and skulls, and are housed in the Rijksmuseum van Natuurlijke Historie, Leiden. The collection data and some measurements of the two specimens are given in Table 1. The body measurements and weight are those recorded on the labels; the wet spirit-preserved animals were measured according to the methods described by Husson (1960) (A. M. Husson, *pers. comm.*).

TABLE 1  
COLLECTION DATA AND MEASUREMENTS OF *Rattus villosissimus* SPECIMENS FROM  
WESTERN AUSTRALIA

Registration No.	.....	.....	.....	20682	20683
Locality	.....	.....	.....	bed of Wolf Creek approx. 1.5 km from Carranya Homestead (127° 45', 19° 15')	approx. 32 km NE of Sturt Creek Homestead (128° 22', 18° 55')
Date	.....	.....	.....	26 August 1968	28 August 1968
Age and sex	.....	.....	.....	juv. ♀	juv. ♀
Head and body length	.....	.....	.....	137 mm	127 mm
Tail length	.....	.....	.....	131 "	112 "
Hindfoot length (with claw)	.....	.....	.....	34 "	31 "
Ear length	.....	.....	.....	17 "	17 "
Weight	.....	.....	.....	77 g	—
Skull, overall length	.....	.....	.....	35.7 mm	33.8 mm
Basal length	.....	.....	.....	31.9 "	30.2 "
Zygomatic width	.....	.....	.....	18.7 "	17.9 "
Interorbital width	.....	.....	.....	4.5 "	4.7 "
Braincase width	.....	.....	.....	15.6 "	15.3 "
Mastoid width	.....	.....	.....	13.0 "	12.4 "
Nasals length	.....	.....	.....	12.4 "	11.5 "
Nasals width	.....	.....	.....	3.9 "	3.5 "
Palatal length	.....	.....	.....	19.2 "	17.9 "
Incisive foramen length	.....	.....	.....	7.6 "	7.0 "
Incisive foramina width	.....	.....	.....	1.9 "	1.7 "
Inside m <sup>1-2</sup> width	.....	.....	.....	2.0 "	1.9 "
Outside m <sup>1-2</sup> width	.....	.....	.....	7.2 "	7.2 "
Bulla length	.....	.....	.....	7.3 "	7.0 "
Crowns m <sup>1-3</sup> length	.....	.....	.....	7.2 "	6.7 "
Alveoli m <sup>1-3</sup> length	.....	.....	.....	7.4 "	7.1 "
Crowns m <sup>1-2</sup> length	.....	.....	.....	5.7 "	5.3 "

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The skins have the characteristic pelage colour of *R. villosissimus*. Dorsally they are a pale grey-brown. The main dorsal hairs have medium grey bases with buff to white tips and are about 14 mm long on the rump. The guard hairs are long and black, a few have white tips. On the larger specimen they are up to 25 mm long on the rump. Ventrally the skins are pale grey. The hairs have pale grey bases and white tips. On the larger specimen the greater part of each hair is white. There are patches of white hair on the chin and throat. The dorsal surface of the feet is white. The tail hairs are comparatively long as is usual in this species. Specimen 20683 had suffered superficial injuries some time prior to death. On the rear portion of both sides there are patches on which new short pale brown hair was growing. Supra-orbital-temporal ridging is poorly developed and there is only a suggestion of ridging above the orbits in the smaller specimen. There is very little tooth wear. The elongated narrow incisive foramina and relatively large bullae help to distinguish the skulls as *R. villosissimus*.

Both specimens were found freshly dead and undamaged on vehicle tracks. On the night of 27 August Dr Mees saw a burrow system in the form of a mound of sand about one m in diameter and 15 cm high, with several entrance holes. Near it was a small pale-greyish mammal which appeared to be of the same species as the two specimens.

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